UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/356,505	07/19/1999	HIEYA TAKEO	Q55129	7922

7590 04/24/2002

DARRYL MEXIC
SUGHRUE MION ZINN MACPEAK & SEAS PLLC
2100 PENNSYLVANIA AVENUE NW
WASHINGTON, DC 200373202

EXAMINER	
BHATNAGAR, ANAND P	

ART UNIT	PAPER NUMBER
2623	3

DATE MAILED: 04/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/356,505	Applicant(s) TAKEO, HIEYA	
	Examiner Anand Bhatnagar	Art Unit 2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) *5-9,14,15,20 and 21* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,10-13 and 16-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *2* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Objections

1. Claims 5-9, 14, 15, 20, and 21 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot be dependent from another multiple dependent claim(s). See MPEP § 608.01(n). Accordingly, these claims will not been further treated on the merits.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-4, 10-13, are16-19 rejected under 35 U.S.C. 102(e) as being anticipated by Kolesnik et al. (U.S. patent 6,249,614).

Regarding claims 1, 10, and 16: Kolesnik et al. discloses a data compression method (col. 1 lines 65-67) of obtaining compressed coded data by quantization of original data (col. 2 lines 5-8, fig. 1 block 110) to obtain quantized data followed by coding and compression (fig. 1 block 130 and 150 and col. 4 lines 17-18, 27-31, and 39-41, where the multiplexer compresses the data signal after it is coded) of the quantized data, the data compression method comprising the steps of:

classifying the quantized data into data having a value representing the quantized data (col. 4 lines 20- 23 and fig. 1 block 110, where the "quantized coefficient matrices" are the values representing the data) and at least one set of classified data representing a data value other than the representative (col. 4 lines 26-35, fig. 1 block 110, and fig. 12 where the quantized matrices are divided into sub-matrices which have different values from the original quantized coefficient matrices and are classified as either dense, sparse, or zero matrices) value while obtaining classification information data regarding the classification (col. 4 lines 26-35, where the sub-matrices are classified as dense, sparse, or zero matrices);

coding the classification information data according to a first coding method (col. 4 lines 29-34, col. 10 lines 38-61, fig. 1 block 130, and fig. 12,

where the matrices are coding by different coding methods depending on the classification of the matrices as dense, sparse, or zero); and

obtaining the coded data by coding at least the classified data according to a second coding method, out of the classified data and the data having the representative value (col. 4 lines 29-34, col. 10 lines 38-61, fig. 1 block 130, and fig. 12, where the matrices are coding by different coding methods depending on the classification of the matrices as dense, sparse, or zero);

Regarding claims 2, 11, and 17: wherein the second coding method is different between the data having the representative value and each set of the classified data (col. 4 lines 29-34, col. 10 lines 38-61 and fig. 10 numbers 1005 –1055, where different coding techniques are used depending on the classification of the matrices).

Regarding claims 3, 12, and 18: wherein the quantized data are obtained by carrying out wavelet transform on the original data followed by quantization thereof (col. 4 lines 49-54 and fig. 1 blocks 105 and 110, where the quantization takes place after the signal has undergone a wavelet transform decomposition).

Regarding claims 16-18: As for the limitation of a computer readable recording medium used to perform limitations above (Kolesnik et al.; fig. 14 blocks 1405, 1410, and 1450).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 4,13, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kolesnik et al. (U.S. patent 6,249,614) and Nafarich (U.S. patent 6,252,994).

Regarding claims 4, 13, and 19: wherein the quantized data are obtained by carrying out DCT on the original data followed by quantization thereof.

Kolesnik et al. discloses an image data compression method which initially decomposes an image signal (fig. 1 blocks 105 and 110 and col. 4 lines 49-55) before it is quantized to undergo data compression. Kolesnik et al. further discloses that alternative methods can be used to decompose a signal (Kolesnik et al.; col. 4 lines 64-67). Kolesnik et al. does not disclose to use DCT as one method to decompose the signal before quantization. Nafarich teaches to perform DCT on a image signal before quantization followed by coding and lastly compression (Nafarich; fig. 4 blocks 102,104F,408F,110, and 114). It would have been obvious to one skilled in the art to combine the teaching of Nafrich to that of Kolesnik et al. because they are analogous in data quantization, coding, and compression. On skilled in the art would have been motivated to substitute

the DCT decomposition unit of Nafarich for the wavelet transform decomposition unit of Kolesnik et al. to create longer strings of zero-value coefficients which enables greater data compression (Nafarich; col. 1 lines 62-67).

Regarding claim 19: As for the limitation of a computer readable recording medium used to perform limitations above (Kolesnik et al.; fig. 14 blocks 1405, 1410, and 1450).

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sodagar et al. (U.S. patent 6,298,163) for wavelet transformation of a signal followed by quantization and coding.

Boon (U.S. patent 6,349,149) for image decomposition using **DCT**.

Ratnakar (U.S. patent 6,256,415) for wavelet transform and coding.

5. Any inquiry into this communication should be directed to Anand Bhatnagar whose telephone number is 703-306-5914, whose supervisor is Amelia Au whose number is 703-308-6604, group receptionist is 703-305-4700, and group fax is 703-872-9314.

AB

Anand Bhatnagar

Art Unit 2623

April 22, 2002

JOSEPH MANCUSO
PRIMARY EXAMINER